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# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/466,627 | 12/17/1999 | MING-LING LO | YO999-429 | 1398 |

7590          06/18/2003

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| EXAMINER |
|---|
| NGUYEN, MAIKHANH |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2176 | 8 |

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

| Office Action Summary | Application No. | Applicant(s) |
|---|---|---|
| | 09/466,627 | LO ET AL. |
| | Examiner | Art Unit |
| | Maikhanh Nguyen | 2176 |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on _17 December 1999_ .

2a)☐ This action is **FINAL**.      2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) _1-75_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☒ Claim(s) _1-75_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All  b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _4-7_ .

4)☐ Interview Summary (PTO-413) Paper No(s). _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: .

U.S. Patent and Trademark Office
PTO-326 (Rev. 04-01)           Office Action Summary          Part of Paper No. 8

## DETAILED ACTION

1.      This action is responsive to communications: original application filed 12/17/1999; IDS

filed 12/17/1999, 05/01/2003, 05/02/2003 and 05/07/2003.

2.      Claims 1-75 are currently pending in this application. Claims 1, 46 and 61 are

independent claims.

## Information Disclosure Statement

3.      The references listed in the information disclosure statement (IDS) submitted on

12/17/2003 have been already considered by the examiner in the duplicate copy information

disclosure statement filed on 05/01/2003.

## Specification

4.      The disclosure is objected to because it contains embedded hyperlinks and/or other form

of browser-executable code for example at page 1. Applicant is required to delete the embedded

hyperlinks and/or other form of browser-executable code. See MPEP § 608.01.

### Claim Obj ctions


5.     Claim 30 is objected to because of the following informalities:  Claim 30 recites "a data

processing device comprising: the at least one medium according to claim 30" (page 50, line 31).

A claim can not be a dependent of itself.  Appropriate correction is required.


### Claim Rejections - 35 USC § 103


6.     The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth
> in section 102 of this title, if the differences between the subject matter sought to be patented and the prior
> art are   such that the subject matter as a whole would have been obvious at the time the invention was
> made to a person having ordinary skill in the art to which said subject matter pertains.  Patentability shall
> not be negatived by the manner in which the invention was made.


Claims 1-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Turau**

"Making Legacy Data Accessible for XML Application" – Publication date 07/1999.

**As to independent claim 1,** Turau teaches establishing a mapping from lists and scalars

corresponding to at least one data source into XML elements and attributes (mapping relational

data into XML documents; page 2; lines 26-27 /mapping from tables to element types and from

fields to attributes; page 3; lines 10-19 & Fig.1).

Turau does not explicitly use the term "at least one data processing device." Turau,

however, teaches "servers, clients" (page 2) and "the processing of the generated documents (e.g.

by SXL processors'" (page 4). It would have been obvious to apply the teaching of Turau for the

data processing device in order to provide a means for performing mapping of relational data

into XML.

**As to dependent claim 2,** " at least one medium readable by a data processing device and

embodying at least one result of the method of claim 1" is inherent to the system of Turau.

**As to dependent claim 3,** Turau teaches at least one processor (XSL processor; page 4,

lines 9-10) configured to use the at least one medium to produce an XML document based on the

mapping (mapping of relational data into XML ...generated XML documents; page 4, lines 5-

30).

**As to dependent claim 4,** Turau teaches the at least one data source comprises at least

two data sources (Database; page 2, lines 1-30), and the data sources are of different types

(attributes and different element types; page 3, lines 4-19 / data sources; page 9, lines 6-7).

**As to dependent claim 5,** Turau teaches at least one medium readable by a data processor

(XSL processors; page 4, lines 9-10) and embodying at least one result of the method of claim 4.

**As to dependent claim 6** includes the same limitations as in claim 3, and is similarly

rejected under the same rationale.

**As to dependent claim 7,** Turau teaches the data source is a relational database

(relational database; page 3, lines 27-30).

**As to dependent claim 8,** "at least one medium readable by a data processing device and

embodying at least one result of the method of claim 7" is inherent to the system of Turau.

**As to dependent claim 9** includes the same limitations as in claim 3, and is similarly

rejected under the same rationale.

As to dependent claim 10, Turau teaches expressing the mapping in constructs of a mapping language (mapping of relational data into XML used in DB2XML; page 4, lines 5-40).

As to dependent claim 11, " at least one medium readable by a data processing device and embodying at least one result of the method of claim 10" is inherent to the system of Turau.

As to dependent claim 12 includes the same limitations as in claim 3, and is similarly rejected under the same rationale.

As to dependent claim 13, Turau teaches inserting the constructs into a DTD to create an annotated DTD (DTD generated; page 5, lines 15-19).

As to dependent claim 14, "at least one medium readable by a data processing device and embodying at least one result of the method of claim 13" is inherent to the system of Turau.

As to dependent claim 15, the rejection of dependent claim 3 above is incorporating herein in full. However, claim 15 further recites "perform the inserting operation".

Turau teaches performing the inserting operation (inserting ... elements; page 7, lines 15-18).

As to dependent claim 16, Turau teaches the constructs comprise at least one of a value specification and a binding specifications (metadata is associated with these elements using attributes; page 4).

As to dependent claim 17, "at least one medium readable by a data processing device and embodying at least one result of the method of claim 16" is inherent to the system of Turau.

As to dependent claim 18 includes the same limitations as in claim 3, and is similarly rejected under the same rationale.

As to dependent claim 19, Turau teaches at least one parameter; the at least one of the

constructs is adapted so that a value of the at least one of the parameters is determinable at a time

of generation of at least one respective XML element associated with the at least one of the

constructs (parameters; page 7, line 23- page 8, line 2).

As to dependent claim 20, "at least one medium readable by a data processing device

and embodying at least one result of the method of claim 19" is inherent to the system of Turau.

As to dependent claim 21 includes the same limitations as in claim 3, and is similarly

rejected under the same rationale. However, claim 21 further recites "pass the value to the

parameter."

Turau teaches pass the value to the parameter (parameters; page 7, lines 23-24 & Fig.3).

As to dependent claim 22, Turau teaches associating values and or formulas with a DTD

(the resulting DTD; page 3, lines 4-19 and Fig.1).

As to dependent claim 23, "at least one medium readable by a data processing device

and embodying at least one result of the method of claim 22" is inherent to the system of Turau.

As to dependent claim 24 includes the same limitations as in claim 3, and is similarly

rejected under the same rationale. However, claim 24 further recites "perform the associating

operation".

Turau teaches perform the associating operation (mapping general XML document into

relational structures; page 3, line 1-19).

As to dependent claim 25, Turau teaches associating one or more lists of data objects

(meta data is associated with these elements; page 4, lines 14-18) or formulas producing data

objects with each DTD construct having a repetition symbol at the end.

**As to dependent claim 26,** "at least one medium readable by a data processing device and embodying at least one result of the method of claim 25" is inherent to the system of Turau.

**As to dependent claim 27,** Turau teaches a data processing device comprising at least one medium according to claim 26; and at least one processor (processor; page 4, lines 9-10) configured to use the at least one medium to produce an XML document (the generated XML documents; page 7, lines 5-9); and perform the associating operation (mapping general XML document into relational structures; page 3, line 1-19).

**As to dependent claim 28,** Turau teaches the associating includes associating one or more lists of data objects or formulas producing data objects with each DTD construct which is not a #PCDATA, a choice list, or an attribute list, and does not end with a repetition symbol (page 2).

**As to dependent claim 29,** "at least one medium readable by a data processing device and embodying at least one result of the method of claim 28" is inherent to the system of Turau.

**As to dependent claim 30** includes the same limitations as in claim 24, and is similarly rejected under the same rationale.

**As to dependent claim 31,** Turau teaches associating includes associating a value or formula producing a value with each PCDATA, choice list, or attribute definition (Meta data is associated with these elements using attributes; page 4, lines 12-17).

**As to dependent claim 32,** "at least one medium readable by a data processing device and embodying at least one result of the method of claim 31" is inherent to the system of Turau.

**As to dependent claim 33** includes the same limitations as in claim 24, and is similarly rejected under the same rationale.

As to dependent claim 34, Turau teaches associating includes, not necessarily in the following order: first associating one or more lists of data objects, or formulas producing data objects with a DTD construct; second associating at least one of the lists or formulas with at least one variable name; and using the variable name as a parameter in at least one other formula (page 2).

As to dependent claim 35, "at least one medium readable by a data processing device and embodying at least one result of the method of claim 34" is inherent to the system of Turau.

As to dependent claim 36 includes the same limitations as in claim 24, and is similarly rejected under the same rationale.

As to dependent claim 37, Turau teaches associating at least one respective environment with a respective XML element to be generated (the generated XML documents; page 7, lines 5-9).

As to dependent claim 38, "at least one medium readable by a data processing device and embodying at least one result of the method of claim 37" is inherent to the system of Turau.

As to dependent claim 39 includes the same limitations as in claim 24, and is similarly rejected under the same rationale.

As to dependent claim 40, Turau teaches the at least one environment comprises information from a parent XML element of the respective XML element; and information from a binding specification of a DTD construct associated with the respective XML element (Fig.1).

As to dependent claim 41, "at least one medium readable by a data processing device and embodying at least one result of the method of claim 40" is inherent to the system of Turau.

**As to dependent claim 42** includes the same limitations as in claim 24, and is similarly

rejected under the same rationale.

**As to dependent claim 43,** Turau teaches the mapping includes at least one respective

specification corresponding to at least one respective XML element the specification comprises

at least one parameter for receiving a value upon generation of an XML document; and the

method further comprises, upon generation of an XML document, sending the at least one

parameter a value according to at least one variable/value pair in the at least one respective

environment (page 3, line 4 – page 4, line 40).

**As to dependent claim 44,** "at least one medium readable by a data processing device

and embodying at least one result of the method of claim 43" is inherent to the system of Turau.

**As to dependent claim 45** includes the same limitations as in claim 24, and is similarly

rejected under the same rationale. However, claim 45 further recites "sending operations."

Turau teaches sending operations (page 3).

**Independent claim 46** is directed to at least one medium readable for implementing the

method of claim 1, and is similarly rejected under the same rationale.

**Dependent claim 47** includes the same limitations as in claim 4, and is similarly rejected

under the same rationale.

**Dependent claim 48** includes the same limitations as in claim 7, and is similarly

rejected under the same rationale.

**Dependent claim 49** includes the same limitations as in claim 10, and is similarly

rejected under the same rationale.

**Dependent claim 50** includes the same limitations as in claim 13, and is similarly rejected under the same rationale.

**Dependent claim 51** includes the same limitations as in claim 16, and is similarly rejected under the same rationale.

**Dependent claim 52** includes the same limitations as in claim 19, and is similarly rejected under the same rationale.

**Dependent claim 53** includes the same limitations as in claim 22, and is similarly rejected under the same rationale.

**Dependent claim 54** includes the same limitations as in claim 25, and is similarly rejected under the same rationale.

**Dependent claim 55** includes the same limitations as in claim 28, and is similarly rejected under the same rationale.

**Dependent claim 56** includes the same limitations as in claim 31, and is similarly rejected under the same rationale.

**Dependent claim 57** includes the same limitations as in claim 34, and is similarly rejected under the same rationale.

**Dependent claim 58** includes the same limitations as in claim 37, and is similarly rejected under the same rationale.

**Dependent claim 59** includes the same limitations as in claim 40, and is similarly rejected under the same rationale.

**Dependent claim 60** includes the same limitations as in claim 43, and is similarly rejected under the same rationale.

**Independent claim 61**, the rejection of independent claim 1 above is incorporated herein in full. However, claim 61 further recites:

- means for receiving data from at least one data source; and

- at least one processor

Turau teaches:

- "means for receiving data from at least one data source" is inherent to the system of

Turau ; and

- at least one processor (servers, clients; page 2/SXL processors; page 4).

**Dependent claim 62** includes the same limitations as in claim 4, and is similarly rejected under the same rationale.

**Dependent claim 63** includes the same limitations as in claim 7, and is similarly rejected under the same rationale.

**Dependent claim 64** includes the same limitations as in claim 10, and is similarly rejected under the same rationale.

**Dependent claim 65** includes the same limitations as in claim 13, and is similarly rejected under the same rationale.

**Dependent claim 66** includes the same limitations as in claim 16, and is similarly rejected under the same rationale.

**Dependent claim 67** includes the same limitations as in claim 19, and is similarly rejected under the same rationale.

**Dependent claim 68** includes the same limitations as in claim 22, and is similarly rejected under the same rationale.

**Dependent claim 69** includes the same limitations as in claim 25, and is similarly rejected under the same rationale.

**Dependent claim 70** includes the same limitations as in claim 28, and is similarly rejected under the same rationale.

**Dependent claim 71** includes the same limitations as in claim 31, and is similarly rejected under the same rationale.

**Dependent claim 72** includes the same limitations as in claim 34, and is similarly rejected under the same rationale.

**Dependent claims 73-75** include the same limitations as in claims 58-60, and are similarly rejected under the same rationale.


## *Conclusion*


7.     The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

| | | |
|---|---|---|
| Cheng et al. | U.S Patent No. 6,366,934 | issued date: Apr. 2, 2002 |
| Cheng-Hung et al. | U.S Patent No. 6,397,232 | issued date: May 28, 2002 |
| Hickman et al. | U.S Patent No. 6,393,466 | issued date: May 21, 2002 |
| Sarkar | U.S Patent No. 6,418,448 | issued date: Jul. 9, 2002 |
| Britton et al. | U.S Patent No. 6,535,896 | issued date: Mar. 18, 2003 |
| Wanderski et al. | U.S Patent No. 6,519,617 | issued date: Feb. 11, 2003 |

Daniela Florescu et al. "A Performance Evaluation of Alternative Mapping Schemes for

Storing XML Data in a Relational Database", INRIA, 05/1999, pages 1-34.

Sudarshan S. Chawathe "Describing and Manipulating XML Data", Department of

Computer Science- University of Maryland, pages 1-7, date unclear.

Takeyuki Shimura et al. "Storage and Retrieval of XML Documents Using Object-

Relational Databases", Information Science Nara Institute of Science and Technology - Japan,

pages 1-12, date unclear.

Ralf Behrens et al. "Is XML really enough?", Medizinische Universitat zu Lubeck

Germany, pages 1-18, date unclear.

Jaroslav Pokorny "XML Functionality", Department of Software Engineering, pages 266-

274, date unclear.

8.      Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Maikhanh Nguyen whose telephone number is (703) 306-0092.

The examiner can normally be reached on Monday - Friday from 9:00am – 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Heather R Herndon can be reached on (703) 308-5186.  The fax phone numbers for

the organization where this application or proceeding is assigned are (703) 308-5403 for regular

communications and (703) 308-5403 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 305-9600.

**Contact Information:**

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or fax to:

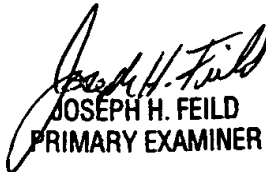AFTER-FINAL faxes must be signed and sent to (703) 746-7238.

OFFICIAL faxes must be signed and sent to (703) 746-7239.

NON OFFICIAL faxes should be sent to (703) 746-7240.

All OFFICIAL faxes will be handled and entered by the docketing personnel. The date
of entry will correspond to the actual FAX reception date unless that date is a Saturday,
Sunday, or a Federal Holiday within the District of Columbia, in which case the official
date of receipt will be the next business day. The application file will be promptly
forwarded to the Examiner unless the application file must be sent to another area of the
Office, e.g., Finance Division for fee charging, etc.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA., Sixth Floor (Receptionist). All hand-delivered responses will be handled
and entered by the docketing personnel. Please do not hand deliver responses directly to
the Examiner.

JOSEPH H. FEILD
PRIMARY EXAMINER

Maikhanh Nguyen
June 12, 2003